

APPENDIX 7 1996-1997 305(b) Report

Iowa's Surface Water Quality:

Rivers and Streams

Of the 9838 miles of rivers and streams assessed during for the 1996-1997 period, about 1.5 percent were described as not supporting designated uses and about 21 percent were assessed as partially supporting those uses. Designated uses for approximately 77 percent of the miles were assessed as fully supported/threatened. Due to the statewide potential for water quality impacts due to agricultural nonpoint sources, no streams were assessed as "fully supporting" all of their designated uses.

The major impacts to designated uses of Iowa rivers and streams assessed for this report were most often attributed to habitat alterations and high levels of pathogen indicators. Moderate/minor impacts were most often caused by siltation and flow alterations. Other, less common causes of impairments included toxicity of unknown origin, priority organics (polychlorinated biphenyls), ammonia, nitrate, plant nutrients, and suspended solids.

The most commonly identified sources of impairments to water quality were modifications to stream habitats and pollutants (especially silt) delivered to rivers and streams in agricultural nonpoint source pollution. Less-commonly identified sources of impairment included industrial point sources, municipal point sources, combined sewer overflows, urban nonpoint source runoff, resource extraction (e.g., mining), natural, unknown, and other sources.

Lakes

Designated uses for approximately 64 percent of the 43,034 lake acres assessed were determined to be either fully supporting or fully supporting/threatened. About 35 percent of lake acres assessed were partially supporting, and less than 1 percent were assessed as not supporting designated uses. Assessments of Iowa's 118 significant, publicly-owned lakes--Iowa's priority lakes for restoration projects--showed that designated uses were either fully supported or fully supported/threatened in approximately one-half of the lakes and 64 percent of the acres assessed.

The most commonly-identified causes of impairments to Iowa lakes were organic enrichment, nuisance aquatic plants, turbidity, and siltation. The primary sources of these impairments are agricultural nonpoint sources and naturally-occurring shallowness that occurs in many of Iowa's natural lakes. Municipal point sources, urban runoff, and exotic species (e.g., carp) also pose threats to lake water quality in Iowa, although to a lesser degree than agricultural nonpoint sources.

Due to the natural fertility of Iowa's soils, all Iowa lakes have relatively high productivity and are considered eutrophic. High acidity (low pH) is not a problem in Iowa lakes. A 1994 evaluation of water quality trends in the 115 significant publicly-owned lakes showed that water quality was stable in 96 lakes, degrading in ten lakes, and improving in seven lakes.

The IDNR, in cooperation with several agencies, participates in a variety of pollution control and restoration programs for Iowa lakes. These programs address both agricultural and nonagricultural sources of pollution and have significantly improved water quality and recreation potential at several Iowa lakes.

Flood Control Reservoirs

Of the four federal flood control reservoirs in Iowa, the designated swimmable and fishable and uses for Saylorville, Coralville, and Rathbun reservoirs were assessed as fully supporting/threatened. Results of long term water quality monitoring projects sponsored by the U.S. Army Corp of Engineers have shown that these reservoirs have good water quality with few violations of state water quality criteria. The most important water quality problem at these lakes is delivery of high amounts of silts in runoff from the watersheds of these reservoirs. In addition, the delivery of agricultural pesticides to Rathbun Reservoir in Appanoose County threatens the designated drinking water uses for that reservoir and the Chariton River.

Wetlands

Approximately 43 percent of the 33,533 acres of wetlands were assessed as fully supporting or fully supported/threatened designated uses. About 43 percent of the wetland acres were assessed as partially supporting, and about 14 percent as not supporting designated uses. In the approximately 150 years since European-American settlement of the state, wetland acreage in Iowa has declined from several million acres to approximately 38,000 acres today. Loss of wetlands has resulted primarily from wetland drainage and river channelization activities associated with agricultural development of the state.

Most Iowa wetlands are protected by the general surface water quality criteria of the Iowa water quality standards; some wetlands are also designated for aquatic life and swimmable uses. IDNR regulates wetlands through the Clean Water Act Section 401 certification process and through recent state legislation that provides for an inventory and protection of certain types of wetlands. The Prairie Pothole Joint Venture (PPJV) is a multi-agency effort to prevent further loss of wetlands through land purchase and wetland restoration. Since the PPJV began in Iowa in 1987, over 27,000 acres of land have been purchased of which 7,100 acres are in existing or restorable wetlands.

Table 1-1. Summary of the degree to which Iowa waterbodies were assessed as supporting all their beneficial uses as described in the *Iowa Water Quality Standards* (IAC 1996) during the 1996-1997 biennial period. The number of waterbodies or waterbody subsegments is included in parenthesis*; the percentage of miles / acres assessed, fully, partially, and not supporting uses is also included.

Waterbody Type	Size Designated for Beneficial Uses	Size Assessed for Support of Uses	Level to which all uses are supported:		
			Fully Supporting or FS/Threatened	Partially Supporting	Not Supporting
Rivers/streams: miles	12,186 (1,068)*	9,838 (751)	7,585 (563) 77%	2,108 (179) 21%	145 (9) 1.5%
Publicly-owned lakes: acres	47,603 (279)	43,034 (141)	27,590 (84) 64%	15,048 (51) 35%	396 (6) 0.9%
Flood control reservoirs: acres	40,850 (4)	40,850 (4) 100%	40,850 (4) 100%	(0)	0 (0)
Publicly-owned wetlands: acres	27,273 (88)	33,533 (123)	14,439 (63) 43%	14,496 (45) 43%	4,598 (15) 14%

*For purposes of Section 305(b) assessments, Iowa's rivers and streams have been divided into waterbodies and waterbody subsegments. One river may be divided into several waterbodies; each waterbody may be further divided into subsegments. Each publicly-owned lake, reservoir, and wetland, however, is considered to be one waterbody.